



## ARM Cortex-M1™ for Altera Cyclone® III Now Available

The Cortex-M1 Development Kit provides developers with a feature-rich, integrated development environment, optimized for broad use.

The ARM Cortex-M1™ Development Kit offers a targeted solution for the development of ARM embedded systems on Altera Cyclone® III FPGAs. Using an implementation of the ARM Cortex-M1 processor that is seamlessly integrated into the Altera Quartus® II and Altera SOPC Builder environments, the ARM Cortex-M1 Development Kit provides developers with a feature-rich, integrated development environment optimized for a wide range of ARM processor-based devices.

The kit includes a quick-start tutorial, example design projects, and everything necessary to create an ARM embedded system on FPGA that is capable of running software kernels and real-time operating systems out-of-the-box. The ARM Cortex-M1 FPGA Development Kit is designed to be used in conjunction with the Altera Cyclone III Starter Board, also available from Arrow Electronics.

### The ARM Cortex-M1 Processor ▶

The ARM Cortex-M1 processor, a high-quality, industry-standard processor for embedded systems on FPGAs, brings all the tools and operating systems of the ARM Connected Community to FPGA users, as well as upward compatibility with processors such as the ARM Cortex-M3. As a result, the ARM Cortex-M1 processor enables developers to reduce engineering costs through the standardization of products on a single architecture spanning FPGAs, MCUs, ASICs, and ASSPs. The Cortex-M1 delivers impressive 0.8 DMIPS/MHz efficiency in a small three-stage design, offering the benefits of broad system support, architectural compatibility, and FPGA vendor independence.

### ARM Embedded Development Solution for Altera Cyclone III ▶

Combination of the ARM Cortex-M1 Development Kit and the Altera Cyclone III starter kit provides a total solution for both hardware and software development, on Altera Cyclone III, of embedded systems based on ARM Cortex-M1. The following are included in the ARM Embedded Development Solution for Altera Cyclone III:

- ARM Cortex-M1 processor
- ARM example embedded system, documentation, and tutorial
- ARM RealView MDK software development tool chain
- Altera Cyclone III starter kit development board
- Altera Quartus II implementation tool
- Altera SOPC Builder system design tool and peripherals
- ARM Cortex-M1 processor integration into Altera SOPC Builder

The ARM Cortex-M1 processor integrates as a component within the Altera SOPC Builder system-level design tool, enabling the user to rapidly and easily build systems and evaluate embedded



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systems via a GUI environment. The ARM Cortex-M1 processor is configurable, allowing the flexibility to make design trade-offs that remain compatible with the instruction set to ensure code and tools compatibility.

### Industry-Leading Software Development Tools

The ARM Cortex-M1 Development Kit includes the ARM RealView Microcontroller Development Kit, a complete software development environment based on the easy-to-use Keil µVision IDE and Debugger. A foundation of its tool chain is the set of ARM RealView Compilation Tools—industry-recognized as the highest-performance compilers targeted for ARM technology. Developed and tuned to deliver the highest code density while supporting ISO Standard C and C++, the RealView Compiler allows more software functionality to reside in FPGA on-chip RAM. This reduces the need for larger-capacity FPGA devices or external memory and improves performance with significant product cost savings.

For more information on Arrow's Development Tools, pricing and availability, visit [www.arrowdevtools.com](http://www.arrowdevtools.com) or call 1-866-910-3650.